

Responses to Comments in Letter 137 from Richard Danziger, City of Abbotsford

Note: The responses listed below are numbered to correspond to the numbers shown in the right-hand margin of the preceding comment letter.

1. See Letter 107, Response to Comment 16 for discussion of power marketing and need for power.
2. Thank you for your comments.
3. Please see General Response B for discussion of visual impacts and socioeconomic issues in Abbotsford, Canada.
4. See Letter 107, Response to Comment 26 regarding communications interference. See Letter 3, Response to Comment 4 regarding EMF health effects.
5. The Canadian Ministry of Environment, Land and Parks (MELP) independently evaluated the potential air quality impacts of the proposed facility in the Lower Fraser Valley (Volume 1, Appendix K). Please see Letter 3, Response to Comment 2 for a discussion of the air quality impacts attributable to the proposed facility in the Lower Fraser Valley and a comparison with Canadian air quality objectives. The MELP concluded that based on historical PM10 measurements and modeled estimates of PM10 emissions, the addition of PM10 emissions from the proposed facility would not cause an increase in the exceedance frequency of the PM10 objective.

The 24-hour PM10 impacts for downtown Abbotsford are predicted to be on the order of 1 microgram per cubic meter ($\mu\text{g}/\text{m}^3$) under worst-case oil-firing conditions and $0.5 \mu\text{g}/\text{m}^3$ under maximum gas-fired emission conditions. Both of these maxima are less than the detection limits of current PM10 monitoring methods and correspond to 1 percent and 2 percent of the PM10 objective, respectively. The impacts of the proposed facility on the exceedance frequencies and magnitude of PM10 concentrations are expected to be minimal for the City of Abbotsford (Volume 1, Appendix K, page 20).

The most stringent ozone objective that has historically been used for ozone assessments is the Canadian national ambient air quality maximum desirable objective (1-hour average) of 51 parts per billion (ppb). In the eastern Lower Fraser Valley, approximately 1 percent of the measurements exceeded this objective each year.

To determine the impact on ground-level ozone concentrations as a result of S2GF emissions, the MELP applied a sophisticated model for a select set of meteorological conditions that are considered to be associated with a typical summer episode period. Model results show that close to the proposed facility, the ozone concentrations might be up to 5 ppb higher but more likely will be less than 2 ppb higher under episode conditions. Beyond 5 km from the facility, the increases drop off rapidly to values less than 0.5 ppb higher. The duration of ozone episodes does not increase. (Volume 1, Appendix K, page 15)

A new air quality standard for ground-level ozone was approved in June 2000. An assessment was conducted by the MELP to determine the implications of the project-related emissions relative to the new standard. The new Canada Wide Standard for ozone is 65 ppb (daily 8-hour maxima, based on the fourth highest annual measurement, averaged over three consecutive years). Based on analysis of Lower Fraser Valley data collected between 1994 and 1998, the standard was exceeded in Hope. At Chilliwack for 1997 and 1998, the analysis showed that the ozone was with 10 percent of the standard. Other areas of the Lower Fraser Valley that previously exceeded the current ozone objective did not exceed the new standard.

Since there are no present ozone exceedances in Abbotsford, and the predicted ozone increase due to the proposed project is small (less than a 0.5 ppb increase beyond 5 km from the proposed facility), it is unlikely that ozone emissions from the proposed facility would result in exceedances of the new ozone standard in either Abbotsford or Chilliwack. (Volume 1, Appendix K, page 16)

6. For a discussion of incremental NO_x impacts resulting from the proposed facility to the Lower Fraser Valley, please see Letter 3, Response to Comment 2. The MELP concluded that annual NO_x emissions from the proposed facility would account for approximately 0.33 percent of all Lower Fraser Valley emission sources including Washington State (Volume 1, Appendix K, page 3).
7. The EIS acknowledges that there will be air emissions associated with the proposed facility. The incremental impacts of the proposed facility have been thoroughly evaluated and described in the EIS and elsewhere (please see Letter 3, Response to Comment 2). The MELP reported that annual emissions of regulated pollutants from the proposed facility relative to contributions from all emissions in the Lower Fraser Valley (including emission sources from Washington State) would be small; on the order of 1 percent or less (Volume 1, Appendix K, page 4).
8. The applicant for the proposed project has worked closely with Canadian regulators and technical staff to resolve air quality issues associated with the proposed project. With respect to continuous emissions monitoring, please see Letter 134, Response to Comment 5. The air quality impacts of the proposed facility are discussed in Letter 3, Response to Comment 2.
9. Air quality impacts associated with the natural gas extraction industry are beyond the scope of the siting decision that is the subject of this Final EIS.
10. An oxygen correction of 15 percent was used for the analysis. Averaging times are determined at the time the air permit is issued. Typically, mass and concentration limits are based on 1-hour averaging times but sometimes they are averaged over a 24-hour period.
11. To our knowledge, reference levels have never been used as air quality impact criteria. With respect to the establishment of air quality standards and health effects, please see

Letter 3, Response to Comment 1. With respect to PM₁₀ emissions associated with the proposed facility, please see Letter 137, Response 5 (above) and Letter 3, Response to Comment 2.

12. As noted in Letter 3, Response to Comment 1, the National Ambient Air Quality Standards are conservatively established to protect human health. As the air quality impact assessment has demonstrated, the proposed project would comply with all applicable air quality standards, including the Canadian air quality objectives. To our knowledge, the Canadian “reference level” of 25 µg /m³ has never been used to establish air quality impact criteria. Resolving the differences between these two regulatory approaches is beyond the scope of this EIS. The incremental air quality impacts of the proposed facility on Canada are discussed in Letter 3, Response to Comment 2.
13. Please see Letter 3, Response to Comment 2 for a discussion of air quality emissions from the proposed facility and their impacts in the Lower Fraser Valley.
14. Please see Letter 3, Response to Comment 2 for a discussion of project-related air quality impacts to Canada. As noted in Letter 137, Response 7 (above), the MELP concluded that air emissions from the proposed facility relative to contributions from all emissions in the Lower Fraser Valley (including emission sources from Washington State) would be small, on the order of 1 percent or less (Volume 1, Appendix K, page 4).
15. As discussed in Letter 3, Response to Comment 2, the MELP concluded that ozone attributable to the proposed project would not be a significant contributor to ozone in the Lower Fraser Valley (Volume 1, Appendix K, page viii).
16. The reference to PM₁₀ levels at the Abbotsford Airport was an error and has been corrected. With respect to the impact of PM₁₀ emissions from the proposed facility in relation to the Canadian PM₁₀ objective, please see Letter 137, Response to Comment 5 (above) and Letter 3, Response to Comment 2.
17. With respect to the impact of PM₁₀ emissions from the proposed facility in relation to the Canadian PM₁₀ objective, please see Letter 137, Response to Comment 5 (above) and Letter 3, Response to Comment 2.
18. The U.S. EPA Office of Air Quality Planning and Standards has set National Ambient Air Quality Standards for six principal pollutants, called “criteria pollutants”. These criteria pollutants are considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards. Primary standards set limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. As the air quality analysis prepared for the proposed project shows, air emissions from the proposed facility would not exceed the primary standards established to protect public health. In addition, because the incremental impact to overall air quality in the Lower Fraser Valley from the proposed facility would be very

small (see Letter 137, Response to Comment 14 above), agricultural impacts would not be expected as a result of the proposed project.

19. For a discussion of visibility impacts in Canada, please see Letter 49, Response to Comment 7.
20. A lifecycle cost analysis such as is requested is beyond the scope of the decision required for this EIS. Please see Letter 65, Response to Comment 1 for a discussion of greenhouse gases and potential mitigation measures as they relate to the proposed project.
21. The applicant has noted several reasons for the siting decision including proximity to areas of growing electricity demand, interconnections to existing transmission facilities, proximity to existing natural gas pipelines, availability of industrially zoned property, and the availability of water (Exhibit 155, pages 8 and 9).
22. Please see Letter 3, Response to Comment 2 for a discussion of impacts in Canada.
23. Please see Letter 5, Response to Comment 9 and Letter 107, Response to Comment 22 for a discussion of noise impacts related to the proposed project.
24. An aviation plan would be filed with the Federal Aviation Administration to determine if lighting is required.
25. Please see General Response B for discussion of visual impacts of the power line in Abbotsford.
26. We agree that population on the Canadian side of the border has grown rapidly in recent years. The population of the Abbotsford area, for example, increased by 59 percent between 1981 and 1991, making the community one of the fastest growing in Canada (Exhibit 162.7). Please see Letter 3, Responses to Comments 1 and 2 for detailed discussion of air quality in the U.S. and Canada.
27. We assume the commentor is referring to the need to house temporary construction workers. As stated in the EIS Section 3.8, a large portion of the construction work force could find temporary housing in Bellingham, and no significant impacts on housing in Abbotsford are expected.
28. While it is known there are schools, public parks, and recreational facilities on the Canadian side of the border it is not anticipated they will be impacted by this project.
29. Based on water balances that have been performed for the Sumas aquifer (see General Response D), it appears there is sufficient groundwater available for future development, whether or not the S2GF project is built. However, in Washington such water use requires a water right, which can be difficult to obtain. Because the City of Sumas has a fixed amount of water available for use through their water rights, it is true that this project would preclude some other use of the City's water. The City of Sumas recognized this in their 1999 Water System Comprehensive Plan. That document presents a 20-year plan in which the City developed a conservative forecast of residential,

industrial and commercial growth. After identifying the future needs of Sumas and its customers, the City has planned to allocate the remaining available water to SE2. If this project is not built, it is likely that Sumas would attempt to find another industrial user to make use of this water, since a large portion of the water that would be supplied to S2GF can only be used for industrial purposes. If they are not able to find such a user by 2003, it is possible that they would lose the right to the water, based on the terms of their water permit from the Department of Ecology.

30. Governor Locke's letter vetoing the proposed tax exemption is included as Appendix H in Volume 1 of this Final EIS.
31. Please see General Response B for discussion of socioeconomic impacts of the power line in Canada.
32. You are correct. The comparison referenced is just for plant thermal efficiencies. To include a meaningful factor for energy consumption associated with fuel production and transport would require comparing specific plants, fuel sources, production techniques, transport mechanisms, etc.
33. We assume that you are referring to air emissions. No air quality impacts would be expected if Westcoast expands its existing system to provide natural gas to the project, outside of short-term construction impacts associated with trenching additional gas line.
34. A specific marketing plan has not been developed at this time.